Dion

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

REPLY TO THE ATTENTION OF

September 21, 2004

Roy Ball
Environ Corporation
740 Waukegan Road
Suite 401
Deerfield, IL 60015

Re: Revised Human Health Risk Assessment

Dear Roy:

I have received the following document, which was revised in accordance with EPA comments, prepared for the Eagle Zinc site. The revised document addresses the majority of the Agency comments but the following issues remain:

Assessment of potential off-site impacts and offsite exposure pathways from windblown dust. This issue has arisen in several different ways during this investigation. The PRPs general response is that the sampling was adequate for IEPA's purposes and was included as such in the Phase 1 Technical Memorandum. EPA has asked several times for a more complete demonstration that would support the conclusion that there is no offsite migration of dust from the site or the residue piles. EPA has been clear that the demonstration must include data like a wind rose diagram or an evaluation of whether the soil sampling is adequate for an off-site air pathway analysis. As the wind rose diagram has not been provided, it is not possible to complete an evaluation the adequacy of the off-site sampling. Also, it is unclear at present whether additional sampling will be required in the on-site residue piles. This data, if necessary, would also be presented in the off-site pathway analysis.

This analysis must be provided in the Remedial Investigation report before this pathway can be completely analyzed At present, this pathway is not incomplete-please make this notation in the text.

Calculation of on-site exposure point concentrations in soil based on site-wide average concentrations. In response to EPA comments, the PRPs stated that representative concentrations of COPCs in on-site soil were calculated using all soil samples collected on-site. The underlying assumption is that on-site receptors can move across the site, throughout their exposure period. On page 10, par 2, 2nd sentence, of the revised assessment, the following changes should be made: "~~because~~ These areas do not currently represent actual or anticipated human activity patterns. For purposes of this HHRA, it is assumed that a receptor would uniformly contact affected media across the entire site. Therefore, it is assumed that the representative concentration a receptor could be exposed to is the upper confidence limit on the average across the entire site. However, if an individual's activities were confined to a more limited portion of the site, potential exposures and risks could be different than projected in this HHRA; the potential risks could be either higher or lower than projected in this HHRA, depending on the individual's location and concentrations in soil at that location. Sample ~~receptor presence is considered equally likely in all areas, and sample~~ locations were biased to locations exhibiting elevated XRF field screening levels, all available soil data were combined to calculate representative concentrations of soil COPCs for use in the HHRA."

This change represents the uncertainty of actual conditions being different from those projected in the HHRA.

Calculation of exposure point concentrations. In several cases, the use of ProUCL to verify the 95% UCL concentrations provided different concentrations, in most cases, this appears to have occurred because the HHRA defaulted to a distribution free UCL, even in cases where that selection may not have been appropriate. Though the HHRA cites the latest EPA guidance for calculating exposure point concentrations, OSWER 9285.6-10 - 12/02, it does not appear that the calculations were developed in accordance with that guidance. Please provide an explanation for the variance and whether addressing the comment will change any of the conclusions presented in this revision.

This document is approved with the above corrections. Please provide revised pages to the HHRA by October 5, 2004.

If you have any questions, please contact me.

Sincerely yours,

Dion Novak

Dion Novak
Remedial Project Manager

cc: C. English, CH2M Hill
R. Lanham, IEPA
T. Krueger, EPA